What is claimed is:

1. A process of reducing the sulfur content of cracking products from a fluid catalytic cracking (FCC) process in which a heavy hydrocarbon feed comprising organosulfur compounds is catalytically cracked to lighter products by contact in a cyclic catalyst recirculation cracking process with a circulating fluidizable catalytic cracking equilibrium catalyst inventory, the process comprising:

(i) providing a substantially liquid heavy hydrocarbon feed stream comprising at least one organosulfur compound as an impurity;

(ii) introducing the hydrocarbon feed stream into a FCC reactor unit operating under catalytic cracking conditions and comprising a circulating inventory of an equilibrium catalyst composition;

(iii) removing a portion of the equilibrium catalyst inventory from the FCC reactor unit while replacing all the equilibrium catalyst inventory removed from the unit with fresh catalyst to create a steady state environment within the FCC reactor unit;

(iv) contacting the hydrocarbon feed stream with at least one vanadium compound in an amount sufficient to increase the concentration of vanadium in or on the equilibrium catalyst inventory by about 100 to about 20,000 ppm, relative to the amount of vanadium initially present in or on the catalyst inventory;

(v) contacting the equilibrium catalyst inventory in the FCC reactor unit with the vanadium containing hydrocarbon feed stream under a steady state environment to produce a cracking zone effluent comprising cracked products, including gasoline, having a reduced sulfur content .

2. The process of claim 1 further comprising simultaneously producing a spent catalyst containing coke and strippable hydrocarbons in step (iii).

3. The process of claim 2 further comprising

(i) discharging and separating the effluent mixture into a cracked product rich vapor phase and a solid rich phase comprising spent catalyst; and

(ii) removing the vapor phase as a product and fractionating the vapor to form liquid cracking products, including gasoline, having a reduced sulfur content.

4. The process of claim 1 wherein said at least one vanadium compound is selected from the group consisting of ammonium ortho-, pyro- or meta vanadates, hydrated vanadium oxides, vanadic acids, organometallic vanadium complexes, vanadium sulfate, vanadyl sulfate, vanadium nitrate, vanadium halides and oxyhalides and mixtures thereof.

5. The process of claim 4 wherein said at least one vanadium compound is selected from the group consisting of vanadium oxalate, vanadium sulfate, vanadium naphthenate, vanadium halides, and mixtures thereof.

6. The process of claim 1 wherein the hydrocarbon feed stream is contacted with the vanadium compound in an amount sufficient to increase the concentration of vanadium in or on the cracking catalyst by about 300 to about 5000 ppm, relative to the amount of vanadium initially present in or on the cracking catalyst.

7. The process of claim 6 wherein the hydrocarbon feed stream is contacted with the vanadium compound in an amount sufficient to increase the concentration of vanadium in or on the cracking catalyst by about 500 to about 2000 ppm, relative to the amount of vanadium initially present in or on the cracking catalyst.

8. The process of claim 1 wherein the cracking catalyst comprises a large pore size zeolite.

9. The process of claim 8 wherein the large pore size zeolite comprises a faujasite.

10. The process of claim 1 wherein the hydrocarbon feed further comprises vanadium as an impurity.

11. The process of claim 10 wherein the hydrocarbon feed further comprises nickel as an impurity.

12. An improved process for catalytic cracking of a hydrocarbon feedstock which contains at least one organic sulfur compounds comprising contacting in a fluid catalytic cracking (FCC) reactor an inventory of fluid catalytic cracking equilibrium catalyst, removing a

portion of the catalyst inventory while replacing the same amount of fresh catalyst composition to provide a steady state environment within the FCC reactor, the improvement comprising;

(i) contacting the hydrocarbon feed with at least one vanadium compound in an amount sufficient to increase the concentration of vanadium in or on the equilibrium fluid cracking catalyst inventory by about 100 to about 20,000 ppm, relative to the amount of vanadium initially present in or on the catalyst inventory;

(ii) contacting the equilibrium catalyst with the vanadium containing hydrocarbon feed in a FCC reactor unit under a steady state environment to produce a cracking zone effluent comprising cracked products, including gasoline, having a reduced sulfur content.

13. The process of claim 3 wherein the process further comprises the addition steps of;

(i) stripping the solids rich spent catalyst phase to remove occluded hydrocarbons from the catalyst,

(ii) transporting stripped catalyst from the stripper to a catalyst regenerator;

(iii) regenerating stripped catalyst by contact with oxygen containing gas to produce regenerated catalyst; and

(iv) recycling the regenerated catalyst to the cracking unit to contact further quantities of heavy hydrocarbon feed.